This enforcement mechanism will, in ITI's view, be a far more effective tool in obtaining a higher quality of test results than a requirement for accreditation under a particular government-designed accreditation program.

C. The "Modular Computer" Authorization Program Should Be Adopted.

ITI is extremely encouraged by the proposal to require testing and approval (through the Declaration of Conformity program) of all CPU boards, power supplies and enclosures designed for use in personal computers and marketed directly to the public. However, in order to avoid future confusion and uncertainty as to whether a particular component is a CPU or a peripheral or a component, and thus subject to a different regulatory regime, ITI believes that a new term should be used -- Modular Component -- which would be defined as follows:

> "Modular Component" means a subassembly that performs a specific function such as data storage and retrieval, mass storage, power supply, enclosure[18], data display, or increasing clock speed or processing power and (1) that is intended for use in a personal computer and (2) sold to the public on a stand-alone basis or to a retailer for

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[18] **While as a current matter, a requirement to test and determine the compliance of enclosures makes some sense, ITI hopes that over time the industry moves more toward controlling the sources of emissions and away from containment of emissions through the design of enclosures, etc. If emissions are controlled at the source, even an entirely plastic enclosure should be usable with any mix of compliant components.**

> integration into a computer sold to the public. Specifically included in such definition are disc drives, TV tuner boards, CD ROMs, audio and video processors for games, fax modems, text graphics scanners, turbo cards, memory cards, system planar boards, other I/O cards and similar modular circuitry.
>
> Individual piece parts required to build such subassemblies, such as resistors, capacitors, inductors, transistors, ICs, SIMMs and similar parts are specifically excluded from the definition of Modular Component.

ITI believes that such a definition more appropriately assigns responsibility for electromagnetic emission control to those components that are capable of creating RF noise within a computer. If a manufacturer chooses to sell each component separately,[19] whether or not they are individually capable of working on a stand-alone basis, such manufacturer should bear the burden of designing such component for electromagnetic emissions control and, in so doing, to

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[19] **ITI believes it is necessary to distinguish, however, those modular components that utilize proprietary interfaces to assure that they are not integrated ubiquitously with other Modular Components and that are sold as upgrades to existing computers. If a manufacturer of an integrated, authorized Personal Computer desires to market modular upgrades for such device with proprietary interfaces, it should be able to do so without a separate Declaration of Conformity, and without imposing an additional labelling burden on the retailer who installs/integrates such Component. The two conditions to such activity would be that such Component has been tested for compliance within a typical system and that the user manual and installation instructions clearly spell out the limited population or types of devices in which such modular component will satisfactorily operate.**

prepare a separate Declaration of Conformity compliance.[20]

Indeed, and contrary to the suggestions in the NPRM, ITI does not see any reason for creating or imposing any different test requirements or standards on modular component testing than those that are currently imposed on digital devices generally. In other words, "components" should be tested under ANSI C63.4 in a system environment that is "typical" of the anticipated use of the component in a digital device.[21]

Thus, for example, a motherboard should be tested with the power supply, central processing unit and other components using the highest clock speed and access times with which that motherboard will be marketed, and should include information with the user manual that identifies the maximum processor/clock speed with which the tested components have been shown to comply.[22] Similarly, the

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20 **ITI also recognizes a side benefit from such a program even for its members who are not currently marketing personal computers into the retail market. For these manufacturers, the testing of components is likely to result in a higher standard of quality of all computer componentry, to the benefit even of the Class A products.**

21 **To the extent that any different test procedures may be appropriate for modular components, the proper organization for considering such matters is ANSI C.63, and the Commission should refer any such matters to ANSI before adopting any changes to ANSI C63.4 in this proceeding.**

22 **This will create incentives for Modular Component manufacturers to test components with higher processor**

(continued...)

general rule dealing with the use of special accessories during the testing should be applicable to components: if such accessories are used to obtain compliance, they must be provided with the component that is sold at retail. In other words, there is no need to define a "new" test standard for components; Modular Components can reasonably be tested and established to be compliant using the current approach to system tests.[23]

ITI also supports the requirement to restrict the integration of personal computer systems without further testing of the personal computer as so integrated only to those that in their entirety utilize only such "authorized" Modular Components. To that end, ITI believes the Commission should adopt a new definition of "Modular Computer", being

> A personal computer that has been manufactured using only Modular Components.

Modular Computers could be marketed without further testing, with the "manufacturer"/integrator of such computer instead

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22 (...continued)
speeds, rather than attempting to use lower clock speeds notwithstanding an intent to market the component with the faster processors.

23 There may, however, be a need to develop a different "component" label to distinguish those components that have been tested for integration into a completed system from those computers and peripherals that can be utilized without further integration.

able to rely on the Declaration of Conformity provided by each Modular Component supplier to establish compliance. To the extent, however, that an integrator chose to utilize Modular Components that did not have a Declaration of Conformity, then that manufacturer, whether the wholesale supplier or the retail point of sale integrator, would have to test the computer as so assembled to assure that it complies with the FCC's limits.

To further recognize the more limited resources of smaller integrators and point-of sale suppliers, ITI would recommend that the Commission not require such Modular Computer manufacturers to prepare a separate Declaration of Conformity for such computer. Instead, ITI proposes that such Modular Computers should be conspicuously labelled on each enclosure/case with a simple label that contains (1) the name, address and phone number of the "manufacturer" (typically the retail store or mail order supplier of such products) and (2) the following statement:

> **THIS PRODUCT HAS BEEN ASSEMBLED ENTIRELY FROM MODULAR COMPONENTS THAT HAVE PREVIOUSLY BEEN DETERMINED BY THEIR MANUFACTURER TO COMPLY WITH FCC LIMITS FOR CLASS B COMPUTERS.**

The rules would establish that, by putting this compliance label on the product, the "manufacturer" was stating, under penalty of perjury, that the Modular Computer so labelled was assembled entirely of Modular Components for which the

integrator had received either a Declaration of Conformity or satisfactory proof that a Declaration of Conformity had been completed for the Component. Rather than retaining detailed records required to prepare a separate Declaration of Conformity for each "model" of computer sold, the retailer/ integrator would simply bear the burden of proving, upon audit, that its labelling of the product with a compliance label was appropriate.[24]

In ITI's view, this approach provides a realistic mechanism for controlling the overall level of radio frequency energy being emitted from personal computers; it is reasonably enforceable by the agency and in the marketplace. Moreover, with the simplified labelling and record keeping proposed for such integrators of personal computers, it is not unduly burdensome for Modular Component manufacturers/suppliers or for point of sale integrators/suppliers. Indeed, most of this segment of the industry has, to date, generally ignored the regulations

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[24] **Use of the simple Declaration of Conformity compliance label as discussed above will not be burdensome on point-of-sale manufacturers, who should be readily able to affix such a label on compliant devices without the need, as in the current certification process, to obtain and identify by a unique FCC identifier, each particular model of a product. Indeed, by identifying, as proposed, merely the name, address and phone number of the "responsible" company, much less information than the manufacturer must provide on the Declaration of Conformity, retailers may design and purchase labels in bulk at very little cost.**

with impunity; by imposing the Declaration of Conformity program on manufacturers of previously unregulated modular components, and a reasonably achievable labelling program on retailers, this approach will provide the integrator/supplier with a realistic opportunity for complying, thereby substantially improving the likelihood that a greater proportion of this industry segment will, indeed, comply.

D. Vigorous Enforcement and Consumer Education Is Critical to the Success of Any Authorization Program.

Finally, ITI believes that the ultimate success of this new Declaration of Compliance program, or indeed any authorization program, depends on consumer awareness of the importance of compliance and on a vigorous enforcement program by the FCC. To that end, ITI strongly endorses the reallocation of valuable FCC personnel from the review of certification applications to an active enforcement program for the entire equipment authorization regime. By requiring submission of test reports, on the one hand, and even product samples, on occasion, directly from manufacturers and suppliers, the Commission can better police the marketplace than it is now able to do by reviewing pre-market filings. In this regard, the Commission should also extend its auditing function to test facilities whose test

data is determined, through product sampling, to be less than satisfactory.

Moreover, both industry and government must educate the consumer on the benefits of purchasing compliant products. Unless and until consumers become part of the program and care whether or not they are purchasing compliant or non-compliant products, the marketplace will not be an effective mechanism for weeding out violators. Consumer education must therefore become an important element in any new authorization program.

IV. Conclusion

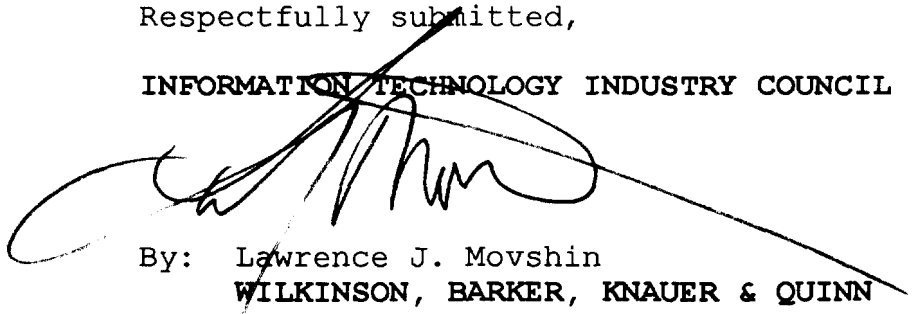
ITI commends the Commission for appropriately recognizing the substantial burden that the certification program currently imposes on computer manufacturers, and for taking responsible actions to alleviate that burden. As the FCC has noted in the NPRM, adoption of this deregulatory approach to equipment authorization will save the United States computer industry hundreds of millions of dollars by eliminating marketing "inefficiencies;" this new program will improve competitiveness domestically and globally; it establishes a realistic opportunity for effective enforcement and consumer awareness and education, thereby allowing, over time, reliance on marketplace forces for attaining compliance; and, in the end, it will not seriously diminish regulatory compliance or increase the potential for

objectionable interference from such devices. To the contrary, by adopting a more realistic program for point of sale suppliers, the Commission will encourage and increase overall compliance at the retail level.

ITI therefore endorses these new concepts and urges expeditious adoption of the newly proposed program, with the few, but critical, modifications discussed above.

Respectfully submitted,

INFORMATION TECHNOLOGY INDUSTRY COUNCIL



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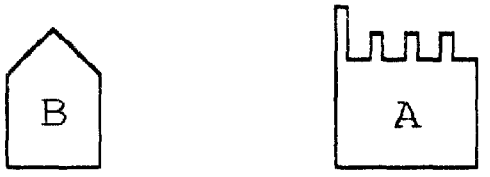
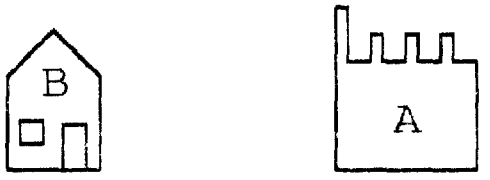
June 5, 1995

ITI ESC-5 PROPOSED LABELS

1. 

2. 

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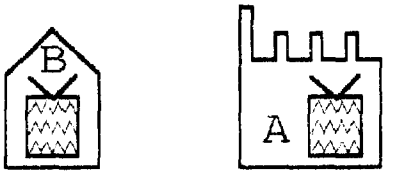
3B. 

4. 

5. 

6. CAN/MEX/USA CLASS B CAN/MEX/USA CLASS A

7. FCC/CISPR CLASS B FCC/CISPR CLASS A

8. FCC/CISPR CLASS B
INTENDED FOR RESIDENTIAL

FCC/CISPR CLASS A
MAY CAUSE INTERFERENCE
IN RESIDENTIAL ENVIRONMENTS

9. CLASS B
FCC Pt15
CISPR22

CLASS A
FCC Pt15
CISPR22

10. CLASS B
DIGITAL DEVICE
FCC Pt15 CISPR22

11. CLASS B
RESIDENTIAL
DIGITAL DEVICE

CLASS A
COMMERCIAL
DIGITAL DEVICE

12. CLASS B
DIGITAL DEVICE
FCC Pt15 CISPR22
CAN/MEX/USA

13. FCC-B
FCC-A

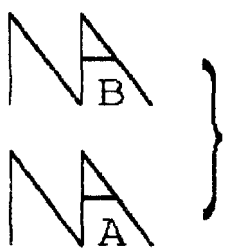
EMI-B
EMI-A

14. FCC/B
FCC/A

EMI))) B

EMI))) A

15. NAFTA/EMI-B
NAFTA/EMI-A

16. 

NORTH AMERICA